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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,731	02/25/2004	Jack Nilsson	200106.4	2742
21324	7590	06/30/2006	EXAMINER	
HAHN LOESER & PARKS, LLP			CABUCOS, MARIE G	
One GOJO Plaza			ART UNIT	
Suite 300			PAPER NUMBER	
AKRON, OH 44311-1076			2163	

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/786,731

Applicant(s)

NILSSON, JACK

Examiner

Marie Antoinette Cabucos

Art Unit

2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/25/2004 and arguments filed on 4/17/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-24, 26-28, 30 and 31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 30 and 31 is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 10-18, 20-24 and 26-28 is/are rejected.
- 7) ☒ Claim(s) 9 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 8, 10, 11, 13, 18, 20, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moilanen (US Patent no. 5,561,439) in view of Buckles (US Patent no. 6,486,849).

2. Regarding claims 1, 13 and 29, Buckles, figure 3, teaches of an antenna comprising more than two radiative antenna elements (52C) each having a first end and a second end, and wherein said second ends of said radiative antenna elements are electrically connected at an apex point (5) and are each disposed outwardly away from said apex point at an acute angle relative to and on a first side of an imaginary plane intersecting said apex point. Buckles does not teach an electrically conductive, non-planar ground reference but is disclosed by Moilanen as referenced by (2) in figure 3 of the prior art. It would have been obvious by one having ordinary skill in the art, at the time of the invention, to manufacture the antenna taught in Buckles with the non-planar ground with the mounting mechanism taught in Moilanen for easy installation.

3. Regarding claim 12, Buckles, figure 3, discloses an antenna wherein said acute angle between each of said radiative antenna elements and said imaginary plane is

between a degree and 89 degrees; and wherein said radiative antenna elements are equally spaced in angle circumferentially around 360 degrees.

4. Regarding claims 8 and 18, ground disclosed in Moilanen is coned shaped having a side length that is about $\frac{1}{4}$ wavelength (col1, lines 48-50).

5. Regarding claims 11 and 26, Moilanen further discloses a mounting mechanism (col. 1, lines 48-50).

6. Claims 2, 4, 6, 14, 16, 21, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moilanen in view of Buckles as applied to claims 1 and 13 above, and further in view of Pla (US Patent no. 6,300,912).

Regarding claims 2 and 14, Moilanen and Buckles does not disclose a dielectric material serving to mechanically connect the radiative antenna elements to the ground while electrically insulating the radiative antenna elements from the ground. Figure 1 of Pla teaches of a dielectric block (20). It would have been obvious by one having ordinary skill in the art, at the time of the invention, to use the dielectric block disclosed in Pla with the antenna disclosed in Moilanen and Buckles so as to support and insulate the antenna elements.

7. Regarding claims 3, 4, 15, and 16, while Moilanen discloses a connection means, Moilanen and Buckles do not disclose connection to a transmission line for interfacing radiative antenna elements to a radio frequency transmitter and/or receiver. Pla discloses connection to an electronic device (col. 4, line 30-33). It would have been obvious by one having ordinary skill in the art, at the time of the invention, for

connection means disclosed in Moilanen to connect to an electronic device as disclosed by Pla for convenience and simple installation.

8. Regarding claims 6, 21, 23 and 24, while Moilanen and Buckles disclose radiative antenna elements that are substantially linear, Moilanen and Buckles do not disclose of elements having a predetermined physical length. Pla discloses of radiative antenna elements that are substantially linear and have a predetermined physical length (col. 2, lines 53-56). It would have been obvious by one having ordinary skill in the art, at the time of the invention, for antenna disclosed in Moilanen and Buckles for elements to have a predetermined physical length as disclosed by Pla for easy tuning.

9. Regarding claims 10 and 20, Moilanen and Buckles do not disclose an outer conductor of a coaxial cable. Pla discloses a coaxial cable having an outer conductor (col. 1, line 35). It would have been obvious by one having ordinary skill in the art, at the time of the invention, to use the coaxial cable disclosed in Pla with the antenna disclosed in Moilanen and Buckles for a compact and simple to install antenna.

10. Regarding claim 27, Buckles, figure 3, discloses an antenna wherein said acute angle between each of said radiative antenna elements and said imaginary plane is between a degree and 89 degrees; and wherein said radiative antenna elements are equally spaced in angle circumferentially around 360 degrees.

11. Claims 5, 17 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moilanen in view of Buckles as applied to claims 1 and 13 above, and further in view of Press (US Patent no. 1,554,231).

Moilanen and Buckles do not disclose of radiative elements being wound coils. Figures 6 and 7 of Press disclose coil antennas. It would have been obvious by one having ordinary skill in the art, at the time of the invention, to construct the antenna disclosed in Moilanen and Buckles with the wound coils of Press for a more compact antenna.

12. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moilanen in view of Buckles as applied to claims 1 and 13 above, and further in view of Kleinschmidt (US Patent no. 6,714,170).

Moilanen and Buckles do not disclose a motor connected to the antenna. Kleinschmidt discloses of connecting a motor to the antenna according to claim 13 (col. 3, lines 5-18). It would have been obvious by one having ordinary skill in the art, at the time of the invention, to provide the antenna disclosed in Moilanen and Buckles with the motor disclosed in Kleinschmidt for antenna rotation.

Allowable Subject Matter

13. Claims 9, 19, 30 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art neither discloses nor suggests the following limitations in the combination with the remaining elements as disclosed in claims 1, 13, 30 and 31:

Limitation of the antenna comprising a ground reference being cylindrical in shape.

Response to Arguments

14. Applicant's arguments filed 4/17/2006 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious by one having ordinary skill in the art, at the time of the invention, to manufacture the multiple radiating elements (figure 1, reference 52) taught in Buckles with the non-planar ground with the mounting mechanism (figure 3, references 2, 5 and 6) taught in Moilanen for the mounting mechanism's easy installation.

15. In response to applicant's argument that the multiple radiating elements of Buckles cannot be incorporated into the mounting mechanism of Moilanen, the test for obviousness is not whether the features of a secondary reference may be bodily

incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

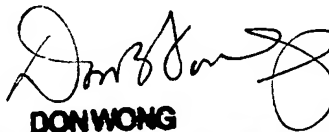
Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marie Antoinette Cabucos whose telephone number is 571-272-8582. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don K. Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Marie Antoinette Cabucos
Examiner
Art Unit 2163


DONWONG
SUPERVISORY PATENT EXAMINER